

Forest Restoration in the Cedar River Municipal Watershed: Site Selection and Prioritization

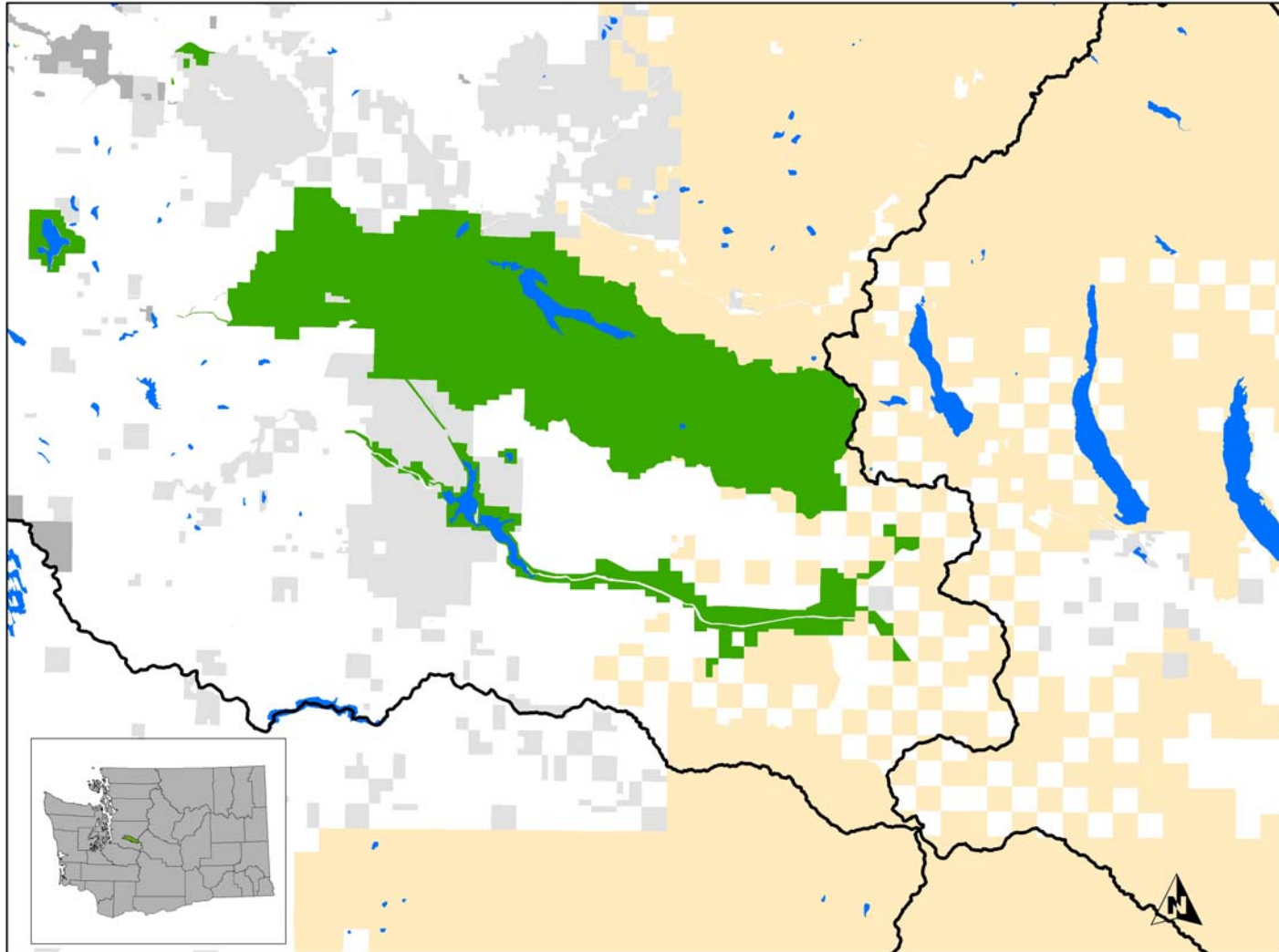
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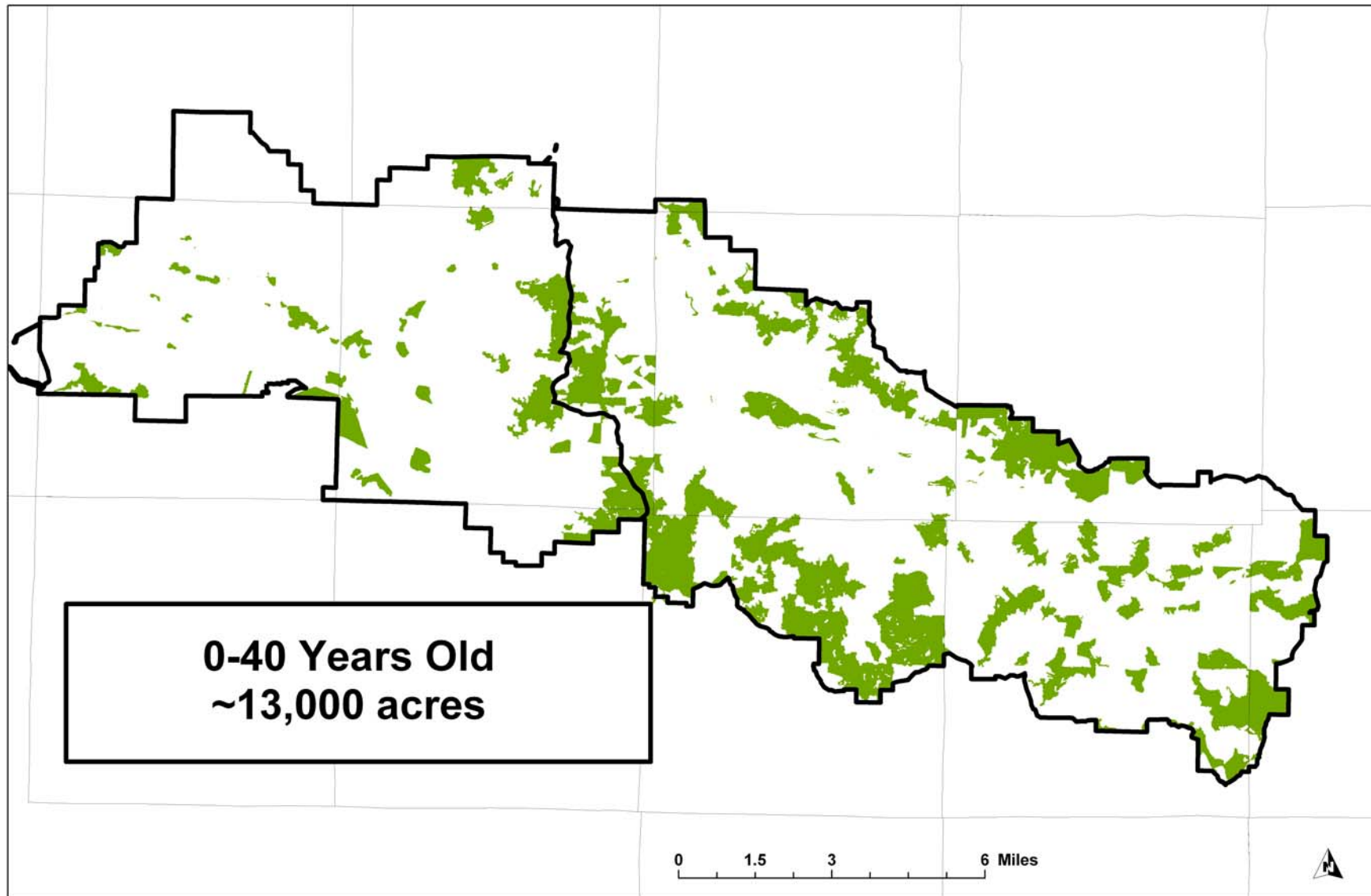


Watershed
Management
Division

Forested Landscape in the PNW



Forests in the CRMW



CRW-HCP Targets based on Dollars Budgeted and Projected Costs:

Ecological Thinning:

2,000 acres = <3% of 2nd-growth

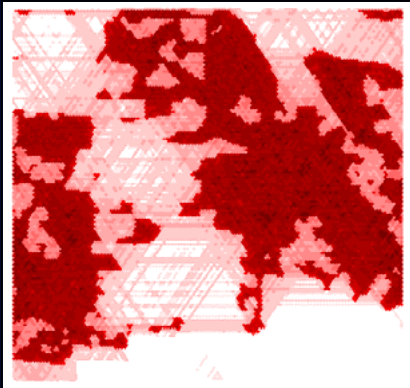
Restoration Thinning:

10,480 acres = 80% of RT Pool

Upland Planting:

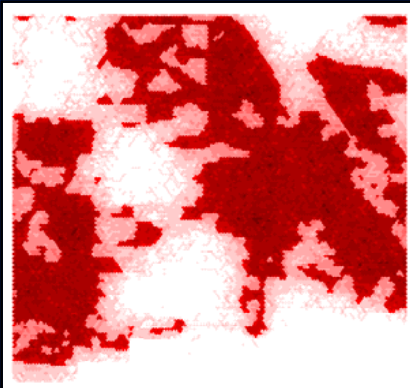
1,000 acres

Landscape Habitat Considerations:



Habitat Connectivity:

- Amount of Habitat
- Patch Size
- Juxtaposition
- Dispersal Capabilities



Habitat Protection:

- No Treatment
- Special Habitats



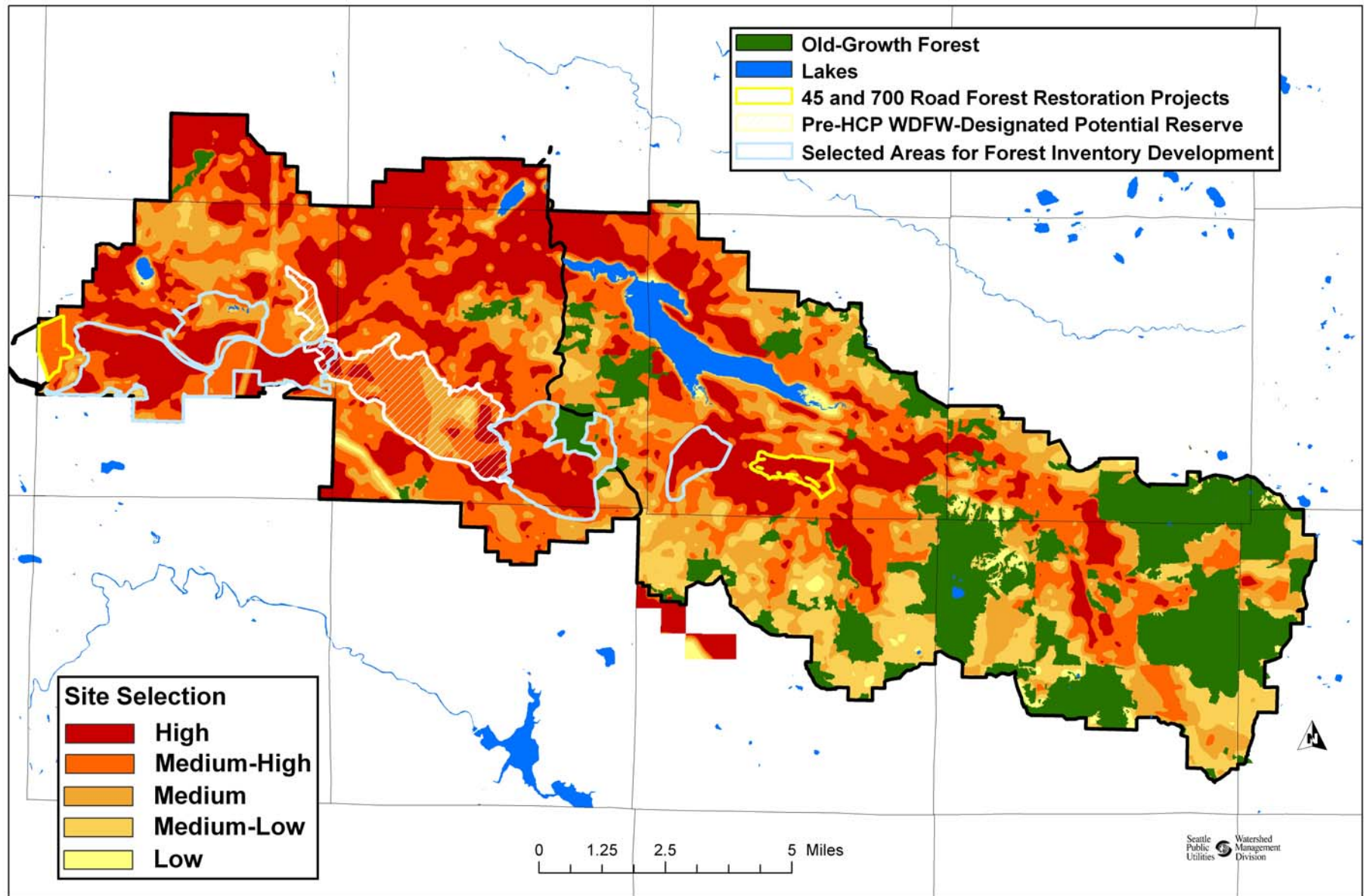
Home Range Sizes of Territorial Wildlife Species Associated with Late-Successional Forest Habitat:

Home Range (acres)	Common Name
<1	Western Redbacked Salamander
1-10	Brown Creeper
10-100	Olive-sided Flycatcher
100-1,000	Pileated Woodpecker, Three-toed Woodpecker, Marten
1,000-10,000	Northern Spotted Owl, Northern Goshawk
>10,000	Fisher, Canada Lynx, Wolverine

Ecological Thinning Site Selection and Prioritization Criteria:

	Stand-Level	Landscape-Level
Primary	<i>1st Filter</i>	<i>2nd Filter</i>
	Remote sensing data:	Habitat connectivity:
	Tree density	Upper/lower watershed
	Tree diameter	Sub-basin planning
Secondary	<i>3rd Filter</i>	<i>4th Filter</i>
	Field data:	Logistical concerns:
	% Live Crown	Water quality
	Snags	Cultural resources

Near-Term Ecological Thinning Projects:



Long-Term Environmental Changes and Landscape-Level Considerations:

- *Forest Growth*
- *Global Warming/Climate Change*
- *Data Development*
- *Changing Prioritization Strategies*
- *Landuse Change on Adjacent Lands*
- *Catastrophic Events*

Ecological Thinning Site Selection and Prioritization Criteria (Filter 1):

Tree Density

Tree Diameter

Stand Density Index/Relative Density

Tree Age

Canopy Closure

Site Class

Slope

Aspect

Elevation

Ecological Thinning Site Selection and Prioritization Criteria (Filter 2):

Connectivity of Late-Successional Forest Habitat

Quality of Late-Successional Forest Habitat

Proximity to CRMW Boundary

Sub-Basin Planning

Restoration Patch Size & Juxtaposition

Upper/Lower CRMW Connectivity

Proximity to Other Restoration Sites

Long-term Temporal Considerations

Coordination with Other Restoration Projects

Ecological Thinning Site Selection and Prioritization Criteria (Filter 3):

Tree Diameter Growth

Live Crown Ratio

Canopy Layering

Tree Species Diversity (Abundance)

Understory Development (Ground Cover)

Understory Species Diversity (Abundance)

Snags

Downed Wood

Horizontal Structural Diversity

Ecological Thinning Site Selection and Prioritization Criteria (Filter 4):

Water Quality

Stand Size

Plant Species Diversity

Structural Complexity

Specific Wildlife Benefit

Riparian Habitat

Road Access

Seasonal Limitations

Thinning Method

Likelihood of Re-Entry

Monitoring Efficiency

Cultural Resources

Affordability